

**REMARKS**

Claims 1 - 6 are pending in the present application. By this Amendment, claims 1 and 3 have each been amended to correct a minor informality. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated January 2, 2004.

**Drawings:**

The Examiner has objected to the drawings in item 1 of the Action due to the Examiner's position that Fig. 1 contains the reference numeral "14X" and Fig. 2 contains the reference numerals "48", "50" and "56", which are not listed or designated in the present specification. Accordingly, reference numeral "14X" has been deleted from Fig. 1 and reference numerals "48", "50" and "56" have been deleted from Fig. 2. As such, withdrawal of this objection is respectfully requested.

**Claim Objections:**

The Examiner has objected to claims 1 and 3 in item 2 of the Action because the word "reaplaceably" is an idiomatic word. However, each of claims 1 and 3 has been amended to correct this minor informality. Accordingly, withdrawal of this objection is respectfully requested.

**As To The Merits:**

As to the merits of this case, the Examiner sets forth the following rejections:

1) claims 1, 2, and 5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by Garr et al. (USP 5,802,420); and

2) claims 3, 4, and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Garr et al. in further view of Sekizawa et al. (USP 6,430,711).

Each of these rejections is respectfully traversed.

**Independent Claim 1:**

Claim 1 calls for a non-volatile memory for storing a total print copy number updated each time a prescribed number of print copies are made, and a subsequent replacement schedule of copy number for each component; and a controller for judging the lifespan of each component on the basis of a comparison between said total print copy number and said subsequent replacement schedule copy number of each component.

Garr discloses in Fig. 7 a monitor screen at a host computer that displays the current toner level and predicts the number of pages remaining that can be printed based on the toner level. That is, according to Garr, “the amount of toner (or the ink level) within the cartridge is measured and, based on previous printing history for this cartridge, the number of pages that still

can be printed using that cartridge or the amount of time that will pass before the cartridge is empty is calculated and displayed at a host computer.”<sup>1</sup>

However, Garr fails to teach the feature of claim 1 concerning storing a total print copy number updated each time a prescribed number of print copies are made.

For example, as shown in Fig. 4(d) of the present invention, once a prescribed number M of print copies are made, as tracked by a count value in a lower region, a total print copy number in an upper count region is incremented to count “1” and the lower region is reset to “0”.

In contrast, as shown by reference numeral 516 in Fig. 7 of Garr, the total print copy number is incremented after each page printed and not each time a prescribed number of print copies are made, as called for in claim 1.

### **Independent Claim 3:**

Claim 3 calls for a non-volatile memory for storing a total printing time updated each time a prescribed printing time period has elapsed, and a subsequent replacement schedule time period for each component; and a controller for judging the lifespan of each component on the basis of a comparison between said total printing time and said subsequent replacement schedule time period of each component.

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<sup>1</sup> Please see, lines 40 – 45, column 10 of Garr.

As discussed above, while Garr may disclose that “the amount of toner (or the ink level) within the cartridge is measured and, based on previous printing history for this cartridge ... the amount of time that will pass before the cartridge is empty is calculated and displayed at a host computer,”<sup>2</sup> Garr fails to disclose a total printing time which is updated each time a prescribed printing time period has elapsed.

Moreover, while the secondary reference of Sekizawa may disclose in column 42, lines 40 – 53 with reference accompanying Figs. 42A and 42B that the tone/ink levels can be monitored on either a monthly, weekly or daily basis, Sekizawa is silent with regard to a total printing time which is updated each time a prescribed printing time period has elapsed.

**Claims 2 and 4:**

Claim 2 calls for when one of the components is replaced, the subsequent replacement schedule copy number for said component as stored in said non-volatile memory is updated to a value obtained by adding a lifespan copy number previously determined for said component to the total print copy number at the time of replacement.

For example, as discussed on page 16 of the present specification, when the print unit has been replaced, the total print copy number at the time of replacement is added to the replacement schedule copy number for the print unit, and the resulting value is (i.e., if the print unit is exchanged at 30,100 copies, then  $30,100 + 30,000 = 60,100$ ) overwritten as the subsequent

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<sup>2</sup> Please see, lines 40 – 45, column 10 of Garr.

replacement schedule copy number. Thereupon, when the total printed copy number reaches 60,100, the lifespan of the print unit is judged to be expired.

Garr fails to disclose this feature. That is, Garr is absent any teachings concerning when one of the components is replaced, the subsequent replacement schedule copy number for said component as stored in said non-volatile memory is updated to a value obtained by adding a lifespan copy number previously determined for said component to the total print copy number at the time of replacement, as called for in claim 2.

Claim 4 calls for when one of the components is replaced, the subsequent replacement schedule time period for said component as stored in said non-volatile memory is updated to a value obtained by adding a lifespan time period previously determined for said component to the total printing time at the time of replacement.

For example, as discussed on page 22 of the present specification, the scheduled replacement time is obtained by adding a lifespan time period previously determined for each component, to the total printing time at the point of replacement.

The applied references of Garr and Sekizawa each fail to disclose this feature of claim 4 concerning when one of the components is replaced, the subsequent replacement schedule time period for said component as stored in said non-volatile memory is updated to a value obtained by adding a lifespan time period previously determined for said component to the total printing time at the time of replacement.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



Thomas E. Brown  
Attorney for Applicants  
Registration No. 44,450

TEB/jnj  
1250 Connecticut Avenue, NW  
Suite 700  
Washington, D.C. 20036  
(202) 822-1100 (t)  
(202) 822-1111 (f)